

A dedicated hardware CRC computation engine is provided to assure the integrity of data transferred between the system memory and storage devices. The CRC computation engine provides CRC calculation “on-the-fly” for the protection of data transferred to and from the system memory without software overhead. The computation of CRC values and optional checking against previously calculated CRC values is selected through the use of an address-mapping scheme. This CRC protection scheme requires a small amount of initial software overhead to allocate the data, CRC value, and CRC error regions of the system memory. After the CRC protection scheme is initialized, all CRC operations are transparent to the executing software.

METHOD AND APPARATUS FOR PROTECTION OF DATA UTILIZING CRC